

Notice of Allowability

Application No.

10/630,082

Examiner

Tho G. Phan

Applicant(s)

YING ET AL.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to a response filed on 8/4/05.
2. ☒ The allowed claim(s) is/are 1-3,5-30.
3. ☒ The drawings filed on 16 July 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Tho G Phan
Primary Examiner
Art Unit: 2821

DETAILED ACTION

Allowable Subject Matter

1. The following is a statement of reasons for the indication of allowable subject matter: Claim 1 is allowable over the art of record because the prior art does not teach a speaker in communication with the acoustic channel and disposed proximate the lower end portion of the acoustic channel and a printed circuit board having forward and rearward primary surfaces and an aperture extending therethrough, the acoustic channel upper end portion merging into or extending through the printed circuit board aperture to guide the sound output from the speaker to exit in a forward direction, and in combination with the remaining claimed limitations.
2. Claim 9 is allowable over the art of record because the prior art does not teach a signal and ground feed configured to exit the acoustic channel and engage a printed circuit board, wherein the ground and signal feeds are positioned adjacent each other proximate a common side of the acoustic channel, wherein the acoustic channel has opposing first and second end portions, and wherein the antenna conductive element is positioned closer to the first end portion of the acoustic channel with the speaker in communication with the second end portion of the acoustic channel, and in combination with the remaining claimed limitations.
3. Claim 11 is allowable over the art of record because the prior art does not teach the acoustic channel is configured as an elongate channel, the acoustic channel adapted, during operation, to guide the output of the speaker out of a forward location of the

wireless terminal at a location that is outside the perimeter of the display screen, and in combination with the remaining claimed limitations.

4. Claim 12 is allowable over the art of record because the prior art does not teach a speaker in communication with the acoustic channel, the acoustic channel adapted, during operation, to guide the output of the speaker to a desired location in the housing, wherein the antenna has a conductive radiating element and is configured as a planar inverted F-antenna, wherein the antenna has an electrical length that is about a quarter wavelength, and wherein the speaker is positioned below the antenna., and in combination with the remaining claimed limitations.

5. Claim 14 is allowable over the art of record because the prior art does not teach the antenna is configured as a dielectric resonating antenna with a dielectric radiating element, and wherein the speaker is positioned below the antenna., and in combination with the remaining claimed limitations.

6. Claim 21 is allowable over the art of record because the prior art does not teach the channel has a center portion that is an air gap, and wherein the antenna element has a major portion that is substantially planar and an edge portion that extends above or below the planar portion, and wherein at least a portion of the antenna element conforms to the shape of the acoustic channel, and in combination with the remaining claimed limitations.

7. Claim 22 is allowable over the art of record because the prior art does not teach a secondary antenna at least a portion of which is positioned in and/or on the acoustic channel and electrically connected with the transceiver; a primary planar inverted F-antenna having a conductive element positioned in the housing antenna cavity and

electrically connected with the transceiver; and in combination with the remaining claimed limitations.

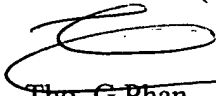
8. Claim 27 is allowable over the art of record because the prior art does not teach the acoustic channel extending generally longitudinally beneath a generally planar printed circuit board and rising to direct the sound to exit out an aperture in the planar printed circuit board and out a front side of the wireless terminal; and in combination with the remaining claimed limitations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho G. Phan whose telephone number is 571-272-1826. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tho G Phan
Primary Examiner
Art Unit 2821